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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/044,910

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Hiroshi Okabe

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4961

7590

12/19/2002

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EXAMINER

DINH, TUAN T

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,910

Applicant(s)

OKABE ET AL.

Examiner

Tuan T Dinh

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-10 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 4 should be designated by a legend such as --**Prior Art**-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 10, lines 3-6, it is unclear. The phrase of "wherein, of said first electrode and said second electrode, an electrode...grounding potential" is not understood.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5, and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Lauffer et al. (U. S. Patent 5,027,253).

As to claim 1, Lauffer discloses an electronic-circuit equipment using a multilayer circuit board (101, column 11, line 25) on which a semiconductor chip (235, column 11, line 27) is mounted, as shown in figures 1-3 comprising:

a thin film capacitor (141, column 11, line 32)) provided on said multilayer circuit board (101), wherein a first electrode (125, column 11, lines 37-38) of said thin film capacitor (141) and a first wiring (121, column 11, line 30) of said multilayer circuit board (101) are electrically connected to each other, a second electrode (135, column 11, line 40) of said thin film capacitor and a second wiring (131, column 1, line 31) of said multilayer circuit board being electrically connected to each other, and a thin film dielectric (151, column 11, lines 42-43) of said thin film capacitor is formed by being grown epitaxially with said first electrode as its base.

As to claim 2, Lauffer discloses said multilayer circuit board includes a resin and a conductor (column 1, lines 14-17), said thin film capacitor (141) is buried in said resin (see figures 2-3), and at least one of electrical connections between said wirings and said electrodes is established via a hole (321a, 321b) bored in said resin.

As to claim 3, Lauffer discloses said first electrode and said first wiring are formed of materials different from each other, and have the same pattern, and are laminated (see figures 1-3, column 10, lines 11-14, and column 11, lines 8-24).

As to claim 5, Lauffer discloses said electrodes (125, 135) are insulated from each other with a material that is the same as a material of said thin film dielectric (151).

As to claim 8, Lauffer discloses said first electrode (125) has a first connection layer positioned on a plane of said first electrode opposite to said thin film dielectric and formed of a metal different from a conductor of said first electrode, said first connection layer being a metal selected from a group including Cr, Mo, and Ti (column 11, lines 10-24).

As to claim 9, Lauffer discloses said second electrode (135) has a second connection layer positioned on a plane facing said thin film dielectric and formed of a metal different from a conductor of said second electrode, said second connection layer being a metal selected from a group including Cr, Mo, and Ti (column 11, lines 10-24).

As best understood to claim 10, Lauffer discloses said first or second electrodes that are positioned nearer to a conductor of a transmission line formed on said multilayer circuit board is set at a grounding potential (column 12, lines 7-10).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lauffer (U. S. Patent 5,027,253) in view of Summerfelt et al. (U. S. Patent 6,319,542).

Lauffer does not disclose said first electrode is a metal selected from a group including Ru, Pt, and Pd and said thin film dielectric is formed of strontium titanate.

Summerfelt shows construction capacitor having an electrode being a metal selected from a group including Ru, Pt, and Pd (column 2, lines 3-15) and a thin film dielectric is formed of strontium titanate (column 5, see table).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an electrode made of either Ru, Pt, and Pd and a thin film dielectric being form of strontium titanate to modify the multiplayer circuit board of Lauffer in order to provide a minimize the oxidation of layers of a thin film capacitor.

Allowable Subject Matter

8. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sunahara, Branchevsky, Akiba et al., Lino et al., Figueroa et al., and Hale et al. disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD
December 15, 2002


DAVID L. TALBOTT
SUPERVISORY PATENT EXAMINER
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